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<151> 2003-07-28

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tgatcaaaac gcaaatcgac gaaaatgtgt cggacaatat caagtcgatg agcgaaaaac   13560

taaaaaggct agaatacgac aatctcacag acagcgttga gatatacggt attcacgaca   13620

gcaggctgaa taataaaaaa attagaaact attatttaac cctagaaaga taatcatatt   13680

gtgacgtacg ttaaagataa tcatgcgtaa aattgacgca tgtgttttat cggtctgtat   13740

atcgaggttt atttattaat ttgaatagat attaagtttt attatattta cacttacata   13800

ctaataataa attcaacaaa caatttattt atgtttattt atttattaaa aaaaaacaaa   13860

aactcaaaat ttcttctata aagtaacaaa actttaaac attctctctt ttacaaaaat   13920

aaacttattt tgtactttaa aaacagtcat gttgtattat aaaataagta attagcttaa   13980

cttatacata atagaaacaa attatactta ttagtcagtc agaaacaact ttggcacata   14040

tcaatattat gctctcgaca aataactttt ttgcattttt tgcacgatgc atttgccttt   14100

cgccttattt tagaggggca gtaagtacag taagtacgtt ttttcattac tggctcttca   14160

gtactgtcat ctgatgtacc aggcacttca tttggcaaaa tattagagat attatcgcgc   14220

aaatatctct tcaaagtagg agcttctaaa cgcttacgca taaacgatga cgtcaggctc   14280
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64

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atgtaaaggt ttctcataaa ttttttgcga ctttggacct tttctccctt gctactgaca 14340

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gccataggcc acctattcgt cttcctactg caggtcatca cagaacacat ttggtctagc 14460

gtgtccactc cgcctttagt ttgattataa tacataacca tttgcggttt accggtactt 14520

tcgttgatag aagcatcctc atcacaagat gataataagt ataccatctt agctggcttc 14580

ggtttatatg agacgagagt aaggggtccg tcaaaacaaa acatcgatgt tcccactggc 14640

ctggagcgac tgttttttcag tacttccggt atctcgcgtt tgtttgatcg cacggttccc 14700

acaatggttg cggccagccc                                               14720
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<213>  Artificial

<220>
<223>  PCR Primer

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catcgatgcc cagcattgag atg                                              23


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<220>
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<400>  26
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<212>  DNA
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<220>
<223>  PCR Primer

<400>  27
gccatccacg ctgtttgac ctccatag                                          28


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<213>  Artificial

<220>
<223>  PCR Primer

<400>  28
gccaatacaa tgtaggctgc tctacac                                          27
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<212>  DNA
<213>  Artificial

<220>
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ggaatcgaag gtttaacaac ccgtaaactc gcccagaagc taggtgtaga gcagcctaca     120

ttgtattggc atgtaaaaaa taagcgggct ttgctcgacg ccttagccat tgagatgtta     180

gataggcacc atactcactt ttgcccttta gaaggggaaa gctggcaaga ttttttacgt    ·240

aataacgcta aaagttttag atgtgcttta ctaagtcatc gcgatggagc aaaagtacat     300

ttaggtacac ggcctacaga aaacagtat gaaactctcg aaaatcaatt agcctttta      360

tgccaacaag ttttttcact agagaatgca ttatatgcac tcagcgctgt ggggcatttt     420

actttaggtt gcgtattgga agatcaagag catcaagtcg ctaaagaaga agggaaaca     480

cctactactg atagtatgcc gccattatta cgacaagcta tcgaattatt tgatcaccaa     540

ggtgcagagc cagccttctt attcggcctt gaattgatca tatgcggatt agaaaaacaa     600

cttaaatgtg aaagtgggtc cgcgtacagc cgcgcgcgta cgaaaaacaa .ttacgggtct     660

accatcgagg gcctgctcga tctcccggac gacgacgccc ccgaagaggc ggggctggcg     720

gctccgcgcc tgtcctttct ccccgcggga cacacgcgca gactgtcgac ggcccccccg     780

accgatgtca gcctggggga cgagctccac ttagacggcg aggacgtggc gatggcgcat     840

gccgacgcgc tagacgattt cgatctggac atgttggggg acggggattc cccgggtccg     900

_ggatttaccc_cccacgactc cgccccctac ggcgctctgg atatggccga cttcgagttt     960

gagcagatgt ttaccgatgc ccttggaatt gacgagtacg gtggg                    1005
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<212>  PRT
<213>  Artificial

<220>
<223>  tTA

<400>  30

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1               5                   10                  15


Leu Leu Asn Glu Val Gly Ile Glu Gly Leu Thr Thr Arg Lys Leu Ala
            20                  25                  30


Gln Lys Leu Gly Val Glu Gln Pro Thr Leu Tyr Trp His Val Lys Asn
        35                  40                  45
```

Lys Arg Ala Leu Leu Asp Ala Leu Ala Ile Glu Met Leu Asp Arg His
    50   55   60

His Thr His Phe Cys Pro Leu Glu Gly Glu Ser Trp Gln Asp Phe Leu
65   70   75   80

Arg Asn Asn Ala Lys Ser Phe Arg Cys Ala Leu Leu Ser His Arg Asp
                85   90   95

Gly Ala Lys Val His Leu Gly Thr Arg Pro Thr Glu Lys Gln Tyr Glu
            100   105   110

Thr Leu Glu Asn Gln Leu Ala Phe Leu Cys Gln Gln Gly Phe Ser Leu
        115   120   125

Glu Asn Ala Leu Tyr Ala Leu Ser Ala Val Gly His Phe Thr Leu Gly
    130   135   140

Cys Val Leu Glu Asp Gln Glu His Gln Val Ala Lys Glu Glu Arg Glu
145   150   155   160

Thr Pro Thr Thr Asp Ser Met Pro Pro Leu Leu Arg Gln Ala Ile Glu
            165   170   175

Leu Phe Asp His Gln Gly Ala Glu Pro Ala Phe Leu Phe Gly Leu Glu
            180   185   190

Leu Ile Ile Cys Gly Leu Glu Lys Gln Leu Lys Cys Glu Ser Gly Ser
        195   200   205

Ala Tyr Ser Arg Ala Arg Thr Lys Asn Asn Tyr Gly Ser Thr Ile Glu
    210   215   220

Gly Leu Leu Asp Leu Pro Asp Asp Asp Ala Pro Glu Glu Ala Gly Leu
225   230   235   240

Ala Ala Pro Arg Leu Ser Phe Leu Pro Ala Gly His Thr Arg Arg Leu
            245   250   255

Ser Thr Ala Pro Pro Thr Asp Val Ser Leu Gly Asp Glu Leu His Leu
            260   265   270

Asp Gly Glu Asp Val Ala Met Ala His Ala Asp Ala Leu Asp Asp Phe
    275   280   285

Asp Leu Asp Met Leu Gly Asp Gly Asp Ser Pro Gly Pro Gly Phe Thr
    290   295   300

Pro His Asp Ser Ala Pro Tyr Gly Ala Leu Asp Met Ala Asp Phe Glu
305   310   315   320

```
Phe Glu Gln Met Phe Thr Asp Ala Leu Gly Ile Asp Glu Tyr Gly Gly
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<213>  Artificial

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accctctact ggcacgtgaa gaataagcgg gcgctgctgg atgccctggc catcgagatg       180

ctcgaccgcc accacacgca tttttgcccg ttggaaggcg agtcctggca ggacttcctc       240

cgcaataacg ccaagtcgtt ccgctgcgct ctgctgtccc accgagacgg tgccaaagtc       300

catctcggca cgcgcccgac cgaaaagcaa tacgagacac tggagaacca gctcgcgttc       360

ctgtgccagc aaggcttcag cctggaaaat gctctctacg ctctgagcgc cgtcggtcac       420

tttaccctgg gctgcgtgct ggaggaccaa gagcatcaag tcgcaaaaga ggagcgcgag       480

accccaacaa ccgattcgat gcccccactg ctgcgtcagg caatcgagct gttcgatcat       540

caaggagccg agccggcatt cctgttcggc ttggagctga ttatctgcgg attggaaaag       600

caactgaaat gcgagtcggg ctcgggcccc gcgtacagcc gcgcgcgtac gaaaaacaat       660

tacgggtcta ccatcgaggg cctgctcgat ctcccggacg acgacgcccc cgaagaggcg       720

gggctggcgg ctccgcgcct gtcctttctc ccgcgcggac acacgcgcag actgtcgacg       780

gccccccga ccgatgtcag cctgggggac gagctccact tagacggcga ggacgtggcg       840

atggcgcatg ccgacgcgct agacgatttc gatctggaca tgttggggga cggggattcc       900

ccgggtccgg gatttacccc ccacgactcc gcccctacg gcgctctgga tatggccgac       960

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<210>  32
<211>  338
<212>  PRT
<213>  Artificial

<220>
<223>  tTAV

<400>  32

Met Gly Ser Arg Leu Asp Lys Ser Lys Val Ile Asn Ser Ala Leu Glu
1               5               10              15


Leu Leu Asn Glu Val Gly Ile Glu Gly Leu Thr Thr Arg Lys Leu Ala
            20              25              30
```

68

```
Gln Lys Leu Gly Val Glu Gln Pro Thr Leu Tyr Trp His Val Lys Asn
        35                  40              45

Lys Arg Ala Leu Leu Asp Ala Leu Ala Ile Glu Met Leu Asp Arg His
    50              55              60

His Thr His Phe Cys Pro Leu Glu Gly Glu Ser Trp Gln Asp Phe Leu
65              70              75                  80

Arg Asn Asn Ala Lys Ser Phe Arg Cys Ala Leu Leu Ser His Arg Asp
                85              90              95

Gly Ala Lys Val His Leu Gly Thr Arg Pro Thr Glu Lys Gln Tyr Glu
            100             105             110

Thr Leu Glu Asn Gln Leu Ala Phe Leu Cys Gln Gln Gly Phe Ser Leu
        115             120             125

Glu Asn Ala Leu Tyr Ala Leu Ser Ala Val Gly His Phe Thr Leu Gly
    130             135             140

Cys Val Leu Glu Asp Gln Glu His Gln Val Ala Lys Glu Glu Arg Glu
145             150             155             160

Thr Pro Thr Thr Asp Ser Met Pro Pro Leu Leu Arg Gln Ala Ile Glu
                165             170             175

Leu Phe Asp His Gln Gly Ala Glu Pro Ala Phe Leu Phe Gly Leu Glu
            180             185             190

Leu Ile Ile Cys Gly Leu Glu Lys Gln Leu Lys Cys Glu Ser Gly Ser
        195             200             205

Gly Pro Ala Tyr Ser Arg Ala Arg Thr Lys Asn Asn Tyr Gly Ser Thr
    210             215             220

Ile Glu Gly Leu Leu Asp Leu Pro Asp Asp Asp Ala Pro Glu Glu Ala
225             230             235             240

Gly Leu Ala Ala Pro Arg Leu Ser Phe Leu Pro Ala Gly His Thr Arg
                245             250             255

Arg Leu Ser Thr Ala Pro Pro Thr Asp Val Ser Leu Gly Asp Glu Leu
            260             265             270

His Leu Asp Gly Glu Asp Val Ala Met Ala His Ala Asp Ala Leu Asp
        275             280             285
```

69

```
Asp Phe Asp Leu Asp Met Leu Gly Asp Gly Asp Ser Pro Gly Pro Gly
    290                 295                 300

Phe Thr Pro His Asp Ser Ala Pro Tyr Gly Ala Leu Asp Met Ala Asp
305                 310                 315                 320

Phe Glu Phe Glu Gln Met Phe Thr Asp Ala Leu Gly Ile Asp Glu Tyr
                325                 330                 335

Gly Gly
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<213>  Artificial

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tcaattacgg ggtcattagt tcatagccca tatatggagt tccgcgttac ataacttacg       180

gtaaatggcc cgcctggctg accgcccaac gacccccgcc cattgacgtc aataatgacg       240

tatgttccca tagtaacgcc aatagggact ttccattgac gtcaatgggt ggagtattta       300

cgctaaactg cccacttggc agtacatcaa gtgtatcata tgccaagtac gccccctatt       360

gacgtcaatg acggtaaatg gcccgcctgg cattatgccc agtacatgac cttatgggac       420

tttcctactt ggcagtacat ctacgtatta gtcatcgcta ttaccatggt gatgcggttt       480

tggcagtaca tcaatgggcg tggatagcgg tttgactcac ggggatttcc aagtctccac       540

cccattgacg tcaatgggag tttgttttgg caccaaaatc aacgggactt tccaaaatgt       600

cgtaacaact ccgccccatt gacgcaaatg ggcggtaggc gtgtacggtg ggaggtctat       660

ataagcagag ctcgtttagt gaaccgtcag atcgcctgga cagccatcc acgctgtttt        720

gacctccata gaagacaccg ggaccgatcc agcctccgcg gcccgaatt catatgtcta         780

gattagataa aagtaaagtg attaacagcg cattagagct gcttaatgag gtcggaatcg       840

aaggtttaac aacccgtaaa ctcgcccaga agctaggtgt agagcagcct acattgtatt       900

ggcatgtaaa aataagcggg ctttgctcg acgccttagc cattgagatg ttagataggc         960

accatactca cttttgcccct ttagaagggg aaagctggca agatttttta cgtaataacg      1020

ctaaaagttt tagatgtgct ttactaagtc atcgcgatgg agcaaaagta catttaggta      1080

cacggcctac agaaaaacag tatgaaactc tcgaaaatca attagccttt ttatgccaac      1140

aaggtttttc actagagaat gcattatatg cactcagcgc tgtggggcat tttactttag      1200

gttgcgtatt ggaagatcaa gagcatcaag tcgctaaaga agaaagggaa acacctacta      1260
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70

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ctgatagtat gccgccatta ttacgacaag ctatcgaatt atttgatcac caaggtgcag    1320

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tttatttgtg aaatttgtga tgctattgct ttatttgtaa ccattataag ctgcaataaa    1920

caagttaaca acaacaattg cattcatttt atgtttcagg ttcaggggga ggtgtgggag    1980

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